



America Becoming: Racial Trends and Their Consequences, Volume II

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Racial and Ethnic Trends in Children's and Adolescents' Behavior and Development

Vonnie C. McLoyd and Betsy Lozoff

Behavioral and developmental problems are major challenges for U.S. children (Committee on Psychosocial Aspects of Child and Family Health, 1993). Psychosocial and developmental problems, and their interference with normal functioning, have been termed the “new morbidity” (Haggerty et al., 1975), and many of these problems appear to have a strong connection to race and ethnicity. In this chapter, we examine the prevalence of some of these problems in terms of race and ethnicity, and we assess whether and how the connection between race and ethnicity and these problems has changed over time. Addressed also is the concept of public policies as factors contributing to changes in prevalence in the general population, to race and ethnic differences in prevalence, and to race- and ethnic-related historical trends.

Our analysis focuses on two broad sets of indicators: (1) negative physical health conditions during infancy—i.e., iron deficiency, elevated lead levels, low birth weight, prenatal alcohol exposure; and (2) psychosocial problems salient during adolescence—i.e., assaultive violence and homicide, suicide, drug use. We selected these indicators because, historically, there have been striking ethnic and racial differences in their prevalence, and because their preventable nature and impact on society as well as the individual have led them to be major health concerns. The physical health indicators we examine are ones that consistently have been found to contribute to poorer school achievement and lower scores on tests of cognitive functioning.

While reading this chapter, there are three points of importance to note: (1) because race and poverty are closely intertwined, it is often impossible to separate racial trends from socioeconomic disadvantage; (2)

the short summaries in this paper are oversimplified and cannot do justice to the relevant controversies or the limitations of the available studies; and (3) we emphasize national data sets wherever possible, but nationally representative samples are not available for some important indicators.

CONDITIONS DURING INFANCY THAT AFFECT BEHAVIOR AND DEVELOPMENT

The lower scores on tests of cognitive functioning and poorer school achievement of many minority children have received considerable attention. Results from the Third National Health and Nutrition Examination Survey (NHANES III) show that Black and Mexican children, compared to Whites at all levels of family income, receive lower scores on subtests of an IQ scale and on reading and writing achievement tests (Figure 12-1) (Kramer et al., 1995). These test results, combined with their correlates in poor school achievement, mean that the country is losing important human capacity.

Perinatal problems and poor nutrition in infancy contribute to poorer behavioral and developmental outcomes. The rapid growth of the brain in the early years, and the development of fundamental mental and motor processes, make infancy a particularly vulnerable period. Despite the plasticity of the brain, children who experience early biologic insults and stressors are at higher risk for long-lasting behavioral and developmental disturbances. Although considerations of lower test scores and poorer school achievement may acknowledge the role of health and nutrition, specific information is often not incorporated into the discussion; yet this is an issue for which there is nationally representative data, showing major racial differences in the prevalence of common early biologic risks. For some of these problems, there is also evidence that dramatic changes can occur when the country identifies a problem, makes the commitment to improve the situation, and dedicates the necessary resources.

Iron Deficiency

On a worldwide basis, iron deficiency is the most common single-nutrient disorder. Dietary iron deficiency develops relatively slowly, and anemia is a late manifestation. Infants are at particularly high risk because they grow so rapidly and there are limited sources of iron in the infant diet. Approximately one in five babies (0 to 2 years old) in the world has iron-deficiency anemia, and an even higher percentage have iron deficiency without anemia (deMaeyer et al., 1985; Florentino and Guirriec, 1984).

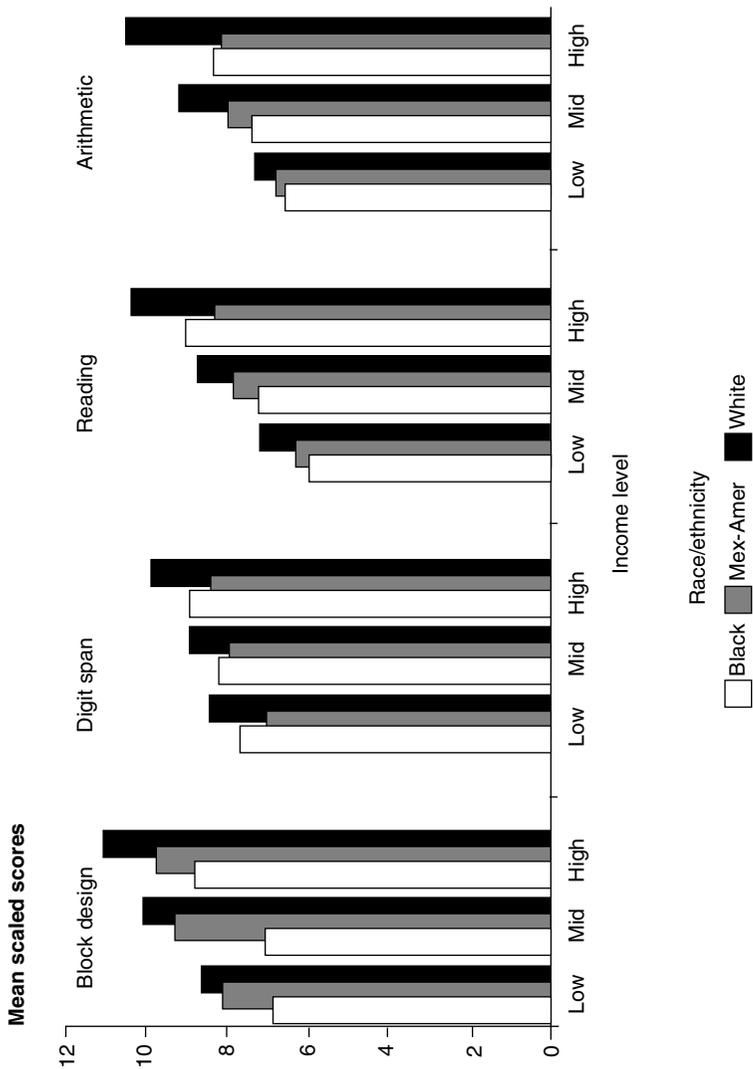


FIGURE 12-1 Mean scaled WISC-R and WRAT-R scores for children aged 6 to 16, by income level and race/ethnicity, 1988-1991. SOURCE: Kramer et al. (1995). Reprinted by permission.

Behavioral/Developmental Outcomes

Because iron is involved in neurotransmitter function and myelin formation, there is reason to worry about ill effects on brain and behavior. Iron-deficiency anemia in infancy is consistently associated with poorer scores on measures of behavior and development (Nokes et al., 1998). Roncagliolo et al. (1998) report direct evidence that iron deficiency adversely affects brain development in the human infant.

A full course of iron treatment does not appear to correct lower mental and motor test scores or behavioral differences in the majority of iron-deficient-anemic infants, despite correction of anemia (Nokes et al., 1998). At early school age (Lozoff et al., 1991), and in early adolescence (Lozoff et al., 1997), formerly iron-deficient children still test lower than peers. Thus, chronic, severe iron deficiency in infancy identifies children at risk for poorer outcome even 10 years after treatment.

Racial and Ethnic Differences in Prevalence

There are marked ethnic and socioeconomic differences in the prevalence of iron deficiency (with or without anemia) in U.S. infants (Ogden, 1998). Iron-deficiency anemia is observed in approximately 5 percent of poor Black and Mexican-American toddlers—twice the proportion found among poor Whites. Nonpoor Black and White infants are at considerably lower risk (1.6 percent and 0.9 percent, respectively), but iron-deficiency anemia is more common in nonpoor Mexican-American toddlers (3.4 percent). The pattern is generally similar for iron deficiency without anemia (Figure 12-2)—poor White infants are three to four times more likely to be iron deficient than nonpoor White infants, but iron deficiency remains more common among nonpoor Blacks. Mexican-American infants are at higher risk regardless of socioeconomic status; iron deficiency affects approximately 18 percent and 12 percent of poor and nonpoor Mexican American infants, respectively. There is also reason to be concerned about other immigrant groups and Alaska Natives. Racial and socioeconomic differences are thought to be largely the result of different dietary habits, although blood loss may be a factor in some groups (Petersen et al., 1996).

Historical Trends

There has been a marked drop in the prevalence of anemia in infants and children in the United States over the last several decades (Vazquez-Seoane et al., 1985; Yip et al., 1987). Iron-deficiency anemia used to be fairly common among poor U.S. infants (U.S. Department of Health and

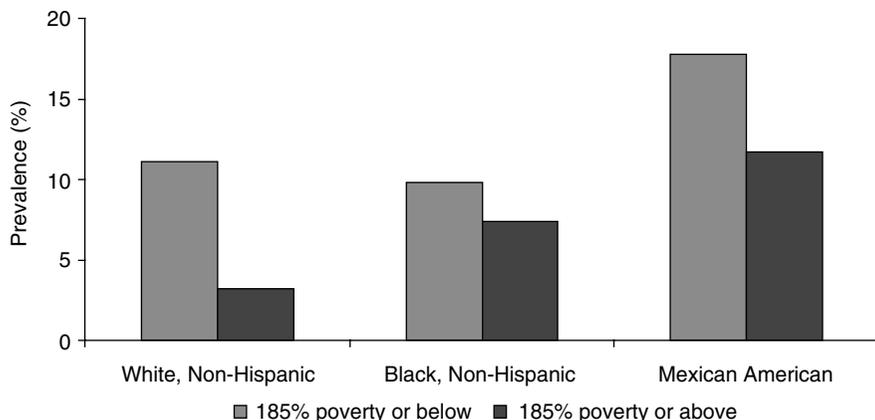


FIGURE 12-2 Iron deficiency among 1- to 2-year-old children by race and poverty status. SOURCE: Ogden, C., Centers for Disease Control and Prevention, unpublished analyses, Third National Health and Nutrition Examination Survey.

Human Services, 1982); it was reported to be 20.6 percent in NHANES II (1976-1980) (Life Sciences Research Office, 1984). NHANES III (1988-1991) reports an almost 10-fold reduction among poor White infants but only 4-fold among poor Black infants (Looker, 1997). Comparisons of change over time are not straightforward, however, because information combining ethnicity and poverty is readily available only for NHANES III (Ogden, 1998).

Impact of Public Policies

The declining prevalence of anemia among U.S. infants is compelling testimony that national health policy can have a major impact. About 30 years ago the American Academy of Pediatrics (AAP) started recommending the use of iron-fortified formula for bottle-fed babies (AAP Committee on Nutrition, 1969). The federal government's Women, Infants, and Children program began providing iron-fortified formula. In addition, the amount of ascorbic acid (which enhances iron absorption) was increased in the infant diet, breastfeeding was encouraged (the iron in breast milk is readily absorbed), and iron-fortified infant cereals are now readily available.

Elevated Lead Levels

In contrast to iron, which the body requires for normal function, there is no known role for lead. The neurotoxicity of lead, though recognized

for centuries, has become a worldwide public health problem only relatively recently because of increasing lead levels in human blood, the result of exposures to lead-based paint and leaded gasoline, among others.

Behavioral/Developmental Outcomes

There is no question that high levels of lead can cause permanent neurologic damage or death. Research and controversy in the last 10 to 20 years has focused on the effects of lead exposure at lower levels (Banks et al., 1997; Pocock et al., 1994; National Research Council, 1993). Taken together, the studies find that children with increased lead burdens show a variety of cognitive and behavioral differences compared to children with lower lead burdens: slightly decreased scores on measures of intelligence, poorer school performance and achievement test scores, increased distractibility, short attention span, impulsiveness, etc. Separating the effects of lead from those of socioeconomic and family factors is challenging. However, congruent findings from studies of rodent and primate models suggest that similar behavioral processes underlie the poorer developmental outcome across species (Banks et al., 1997).

Racial and Ethnic Differences in Prevalence

As with iron deficiency, the most recent data (1988 to 1994) show marked differences in prevalence of elevated lead levels in young children of different ethnic and socioeconomic backgrounds (U.S. Department of Health and Human Services, 1982; Pirkle et al., 1994) (Figure 12-3). About 12 percent of children living in poverty have elevated lead levels compared to 2 percent of children in high-income families. This income gradient is observed in all ethnic groups but most markedly among Black children. In poor Black families, 22 percent of the children have elevated lead levels. Although the proportion among Black children in middle- or high-income families is much lower (6 percent), it is still higher than that among White and Mexican-American children, regardless of family income. These racial and socioeconomic differences seem to be largely related to housing—children who live in houses built before the 1960s, and currently concentrated in older inner city areas, are at highest risk (Mahaffey et al., 1982).

Historical Trends

As research on developmental outcomes has accumulated, the Centers for Disease Control and Prevention has progressively lowered the level of blood lead considered to be of concern—from 60 $\mu\text{g}/\text{dL}$ in the

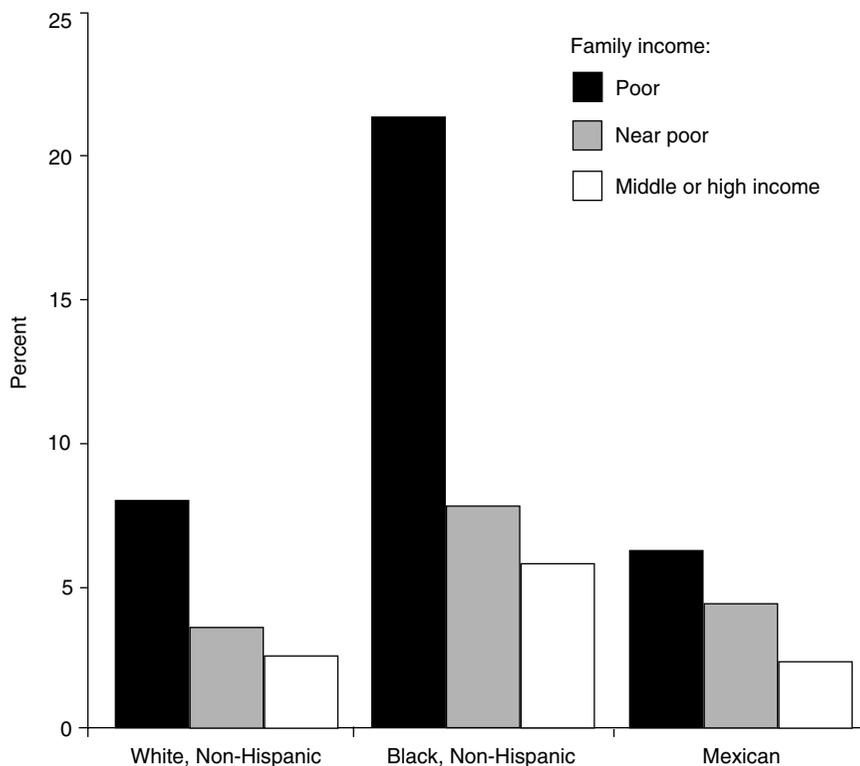


FIGURE 12-3 Elevated blood lead among children 1 to 5 years of age by family income, race, and Hispanic origin: United States, average annual 1988-1994. Notes: Elevated blood lead was defined as having at least 10 micrograms of lead per deciliter of blood. SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, Third National Health and Nutrition Examination Survey.

1950s to 10 $\mu\text{g}/\text{dL}$ in 1991 (Centers for Disease Control and Prevention, 1991; Pirkle et al., 1994). At the same time, there has been a dramatic decline in lead levels in U.S. children, although national data are not available before NHANES II in the late 1970s. For children 1 to 4 years of age, blood-lead levels have declined even further in the last decade—from a mean of 16 $\mu\text{g}/\text{dL}$ in NHANES II (Mahaffey et al., 1982) to less than 4 $\mu\text{g}/\text{dL}$ in NHANES III (Pirkle et al., 1994). The decline has been observed in both Black and White children; however, Blacks were at higher risk in NHANES II and continue to be so in NHANES III.

Impact of Public Policies

The story of lead and public policy is one of both pride and shame. Despite opposition and delays from affected industries, federal regulations prohibiting lead in house paint and gasoline have had a tremendous public-health impact. The declining blood-lead levels of U.S. children provide compelling proof that public policy can protect children from harm.

Low Birth Weight

Low birth weight (LBW) babies, weighing $\leq 2,500$ g at birth, are a heterogeneous group consisting of those born prematurely and term babies who did not grow optimally in utero. Survival of LBW babies, at lower and lower birth weights, has greatly improved with the advent of neonatal intensive care. Nonetheless, the United States has higher rates of LBW babies than many other industrial societies.

Although the vast majority of LBW children have normal outcomes, as a group they have higher rates of neurodevelopmental and behavioral problems (Hack et al., 1995). A small minority has severe disability, such as mental retardation, cerebral palsy, blindness, or deafness. A larger proportion show milder problems in cognition, attention, and neuromotor functioning during the school years and continuing into adolescence. There appears to be a gradient across levels of LBW: neurocognitive differences, observed at all levels of LBW (compared to babies with birth weight $> 2,500$ g), are greater the lower the birth weight (Breslau et al., 1996).

Racial and Ethnic Differences in Prevalence

LBW births are more common among Blacks than among any other ethnic group (David and Collins, 1997; Foster, 1997); and LBW is a problem for Black infants regardless of the level of education (a proxy for socioeconomic status) the mother has attained (Foster, 1997). Conversely, among Whites there is a strong relationship between maternal education and LBW, such that the less education mothers have, the greater the proportion of LBW infants (National Center for Health Statistics, 1998; Guyer et al., 1997). No such gradient relationship is observed among Hispanic, American Indian or Alaska Native, or Asian or Pacific Islander mothers. All these groups have low rates of LBW births (Figure 12-4). The relatively low rates may be misleading, however. Altered glucose metabolism and diabetes during pregnancy, which occur at increased frequency in several of these groups (Balcazar et al., 1992; Kieffer et al., 1995), may lead to higher birth weight in relatively immature infants, with increased risks for poorer health and developmental outcome.

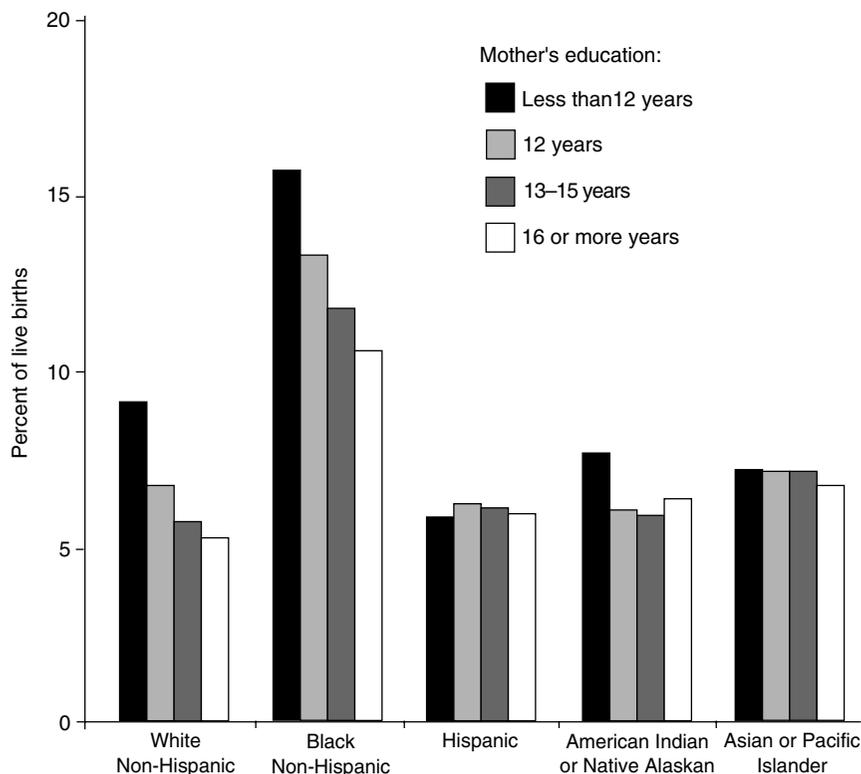


FIGURE 12-4 Low-birth-weight live births among mothers 20 years of age and over by mother's education, race, and Hispanic origin: United States, 1996. Note: Low birth weight refers to an infant weighing less than 2,500 grams at birth. SOURCE: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System.

Historical Trends

The LBW rate declined during the 1970s and early 1980s but has risen 10 percent since then—from a low of 6.7 percent in 1984 to 7.4 percent in 1996 (National Center for Health Statistics, 1998). Some of the recent increase can be attributed to the rising proportion of multiple births among White mothers. Among births to Black mothers, LBW fell to the lowest rate reported since 1987, but the rate remains much higher than that among other ethnic groups. The decline is not the result of fewer very small babies because the level of babies weighing <1,500 g has remained stable among Black births since the late 1980s (about 3 percent).

Impact of Public Policies

In contrast to iron deficiency and environmental lead exposure, public policy has not been as focused or effective when it comes to LBW; yet a number of interventions have been shown to reduce LBW, including prenatal care, mother's good nutrition with adequate weight gain, control of hypertension, avoidance of long working hours and excessive physical exertion toward the end of pregnancy, etc. (Luke et al., 1995). Intervention can also improve later outcomes for LBW babies. For example, additional stimulation for the infant, and social support for families can benefit LBW babies, especially heavier LBW children of lower socioeconomic status families (Hack et al., 1995). Public laws now mandate services for infants with identified congenital disabilities, but much less progress has been made in serving LBW infants at biological and environmental risk.

Prenatal Alcohol Exposure

As with lead, alcohol can be toxic. During pregnancy, the mother's drinking can impair the physical and mental development of the fetus.

Behavioral/Developmental Outcomes

Fetal alcohol syndrome (FAS) is characterized by a distinctive pattern of biological effects—craniofacial changes, growth retardation, and central nervous system impairment including mental retardation and/or hyperactivity (Committee on Substance Abuse and Committee on Children with Disabilities, 1993; Institute of Medicine, 1996). Deficits in growth and development are also found in non-FAS children of nonalcoholic women who drink at moderate-to-heavy levels during pregnancy (Streissguth et al., 1996).

Racial and Ethnic Differences in Prevalence

As yet, there are no comprehensive national data sets for effects of alcohol on fetuses. However, relevant information on alcohol consumption is available. In the 1988 National Maternal and Infant Health Survey (Faden et al., 1997), only a small proportion of women reported heavy alcohol consumption after finding out they were pregnant, but Black women (1.2 percent) and American Indian and Alaska Native (2.2 percent) women were 3 to 4 times more likely than White (0.4 percent), Hispanic (0.3 percent), or Asian and Pacific Islander (0.7 percent) women to report consuming six or more drinks per week (Figure 12-5) (Faden et al., 1997). The incidence of FAS births is approximately 10 times higher

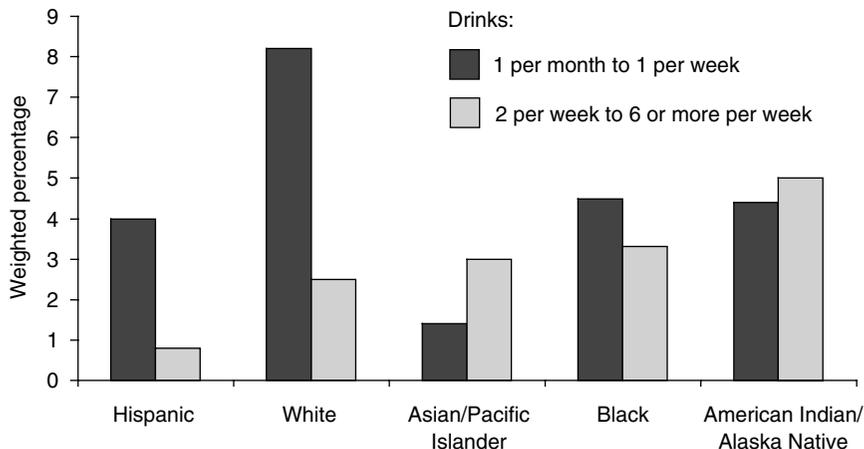


FIGURE 12-5 Alcohol consumption after finding out about pregnancy: Expectant mothers in the United States, 1988. SOURCE: Faden et al. (1997). Reprinted by permission.

among Blacks than Whites (Abel, 1995). Incidence figures are not available for a national sample of American Indian and Alaska Natives, but a surveillance project in four communities estimated that the rate may be 3 to 4 times higher than among Blacks and 30 to 40 times higher than among Whites (Duimstra et al., 1993). FAS is also 10 times more common among women of low socioeconomic status compared to women of middle and high socioeconomic status (Abel, 1995). The effects of alcohol on the fetus worsen with successive pregnancies so that women who are moderate-to-heavy drinkers are at increased risk of giving birth to a child affected by alcohol with each succeeding pregnancy (Jacobson et al., 1996).

Historical Trends

FAS was only recognized 30 years ago. Although obtaining accurate information about alcohol consumption during pregnancy is challenging, national surveys are now starting to include alcohol-consumption related questions. Data show that the proportion of women who consume alcohol during pregnancy decreased after the mid-1980s (Serdula et al., 1991). Much of the decline, however, is the result of changed habits of light drinkers; there has been little decrease in heavy drinking (Serdula et al., 1991; Hankin et al., 1993), which poses the greatest risk to the fetus. In 1995 (the most recent year for which data are available), the Centers for Disease Control found that the incidence of drinking at levels that put the fetus at risk for neurobehavioral impairment was 3.5 percent, with binge

drinking the predominant pattern (87 percent of the cases) (Ebrahim et al., 1998). There are no national data on racial trends over time.

Impact of Public Policies

Public health warnings about the risks of drinking during pregnancy may have contributed to the decline observed in the number of pregnant women drinking alcohol. Women who drink heavily, however, present different challenges because of associated chemical dependency (more smoking and other drug use in addition to alcohol consumption), poor nutrition, depression, abusive relationships, domestic violence, etc. Inadequate societal commitment to providing alcohol-treatment programs for pregnant women has undoubtedly adversely affected the offspring of moderate-to-heavy drinkers. The intermittent heavy drinker, who may pose a great risk to her baby, has been virtually neglected.

BEHAVIORAL AND MENTAL HEALTH PROBLEMS AMONG ADOLESCENTS

A vast number of indicators are available that can inform us about the behavioral and psychological health of adolescents. Because of our interest in historical trends, we limit our discussion to major indicators that have been tracked over several years in nationally representative samples or by the federal statistical system. In addition, the data had to be reliably and consistently measured over time and disaggregated by race and/or ethnicity. Three indicators of internalizing and externalizing symptoms met these criteria—specifically, homicide and assaultive violence, suicide, and drug use. This small corpus of indicators reflects the scarcity of measures of mental health in regularly repeated national surveys of youth.

Our focus on homicide and assaultive violence, suicide, and drug use also reflects the bias in regularly repeated national surveys of youth toward problematic functioning, rather than well-being and resilience. We call attention to this bias because focusing on indicators of problematic functioning may result in a more pessimistic picture of adolescents' overall psychological and behavioral well-being than is, in fact, the case (U.S. Department of Health and Human Services, 1997). We fully endorse the view that successful development is more than the absence of problematic behaviors, and that research documenting the prevalence and determinants of behavioral and psychological well-being should be pursued with a vigor that rivals that devoted to understanding problematic development (McLoyd, 1998a).

The causal role of public policies in historical trends in adolescents' mental health functioning is less clear cut and dramatic than is the case

for some of the physical health conditions relevant to infancy. Here, we briefly note some of these policies; we give relatively more attention to intervention programs that aim to prevent or reduce high-risk behaviors in adolescents. Research on the efficacy of these programs provides important information needed to guide policy formulation and service delivery.

Homicide and Assaultive Violence

Homicide is the second leading cause of death among children and adolescents in the United States. The homicide rate for adolescents age 15 to 19 more than doubled between 1970 and 1994, increasing from 8 per 100,000 in 1970 to 20.3 per 100,000 in 1994. Virtually all of this increase occurred after 1985 (U.S. Department of Health and Human Services, 1997). Both murders and assaults of adolescents older than 12 years tend to be committed by same-age peers who are acquainted with their victims (Christoffel, 1990). In general, the incidence of fatal violence for Hispanic, American Indian and Alaska Native, and Black adolescents far exceeds that for White adolescents (Allen and Mitchell, 1998). For several years during the past two decades, homicide has been the leading cause of death for both Black males and females age 15 to 24 (Allen and Mitchell, 1998; Hammond and Yung, 1993).

Historical Trends by Race

Unfortunately, national data spanning several years are not available for Hispanics, Asian and Pacific Islanders, and American Indian and Alaska Natives. Scholars interested in comparative homicide data for specific non-Black minority populations typically must rely on studies of murder rates conducted in specific regions or cities with sizable concentrations of these ethnic minority groups (Hammond and Yung, 1993). Our discussion of historical trends in homicide rates is limited to Black and White adolescents because national data spanning several years are more readily available for these two groups.

For several decades, the rate of death from homicide has been higher for Black male adolescents than White adolescents. This racial gap markedly increased between 1985 and 1994 (Figure 12-6). Whereas in 1985 Black males age 15 to 19 had a homicide rate of 47 per 100,000, by 1994, the rate had tripled to 136 per 100,000, a rate nearly nine times that for White males of the same age group. For Black males this period also marked a sharp increase in the rate of homicides in which firearms were used (Figure 12-7). Since 1985, the homicide rate for White males doubled (from 7.2 to 15.4 per 100,000). It is noteworthy that the homicide rate for Black

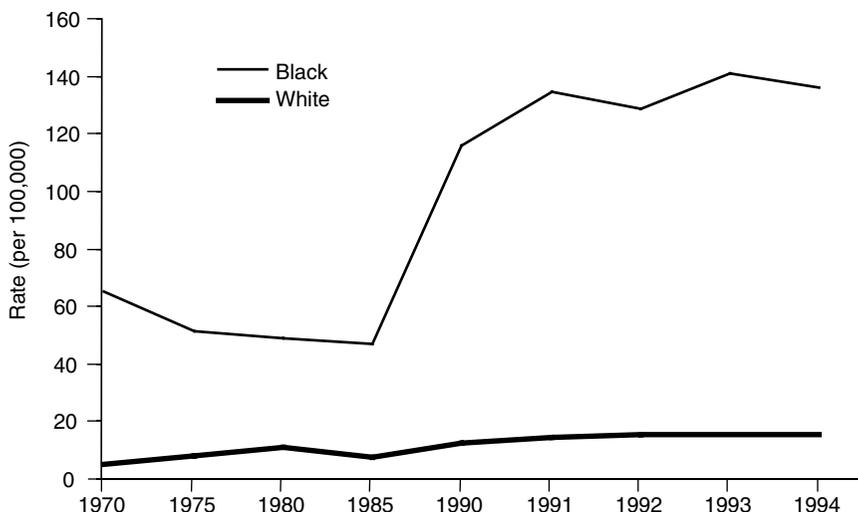


FIGURE 12-6 Rates for adolescent male homicides, age 15 to 19, by race, 1970-1994. SOURCE: U.S. Department of Health and Human Services (1997).

males in this age group actually declined nearly 30 percent from 1970 to 1985 but rose again after 1985 (U.S. Department of Health and Human Services, 1997).

Homicide rates for females age 15 to 19 of both races are much lower than those for males in this age group. The gender disparity is larger among Blacks than Whites (e.g., in 1994, the homicide rate for Black females age 15 to 19 was approximately one-ninth the rate for Black males, whereas the rate for White females in this age group was approximately one-fifth the rate for White males). As with males, the adolescent-homicide rate for Black females has long been higher than the rate for White females. Since 1985, rates for Black females increased by nearly half, whereas the rates for White females remained stable. Assaultive violence not resulting in death generally follows historical patterns similar to those for homicide (U.S. Department of Health and Human Services, 1997).

There has been considerable debate about whether racial and ethnic differences in homicide rates are largely the result of socioeconomic status (SES). Some researchers find differences along racial and ethnic lines even when poverty or SES is taken into account. Extreme poverty, however, is a stronger predictor of homicide than is race or ethnicity. In any case, as Hammond and Yung (1993:148) point out, “. . . the practical effects of excessive risk remain for young Black men because they are

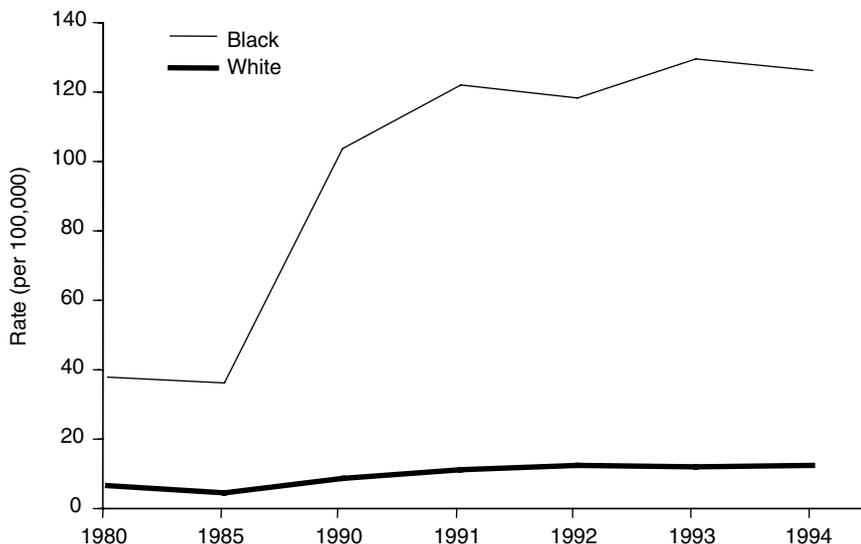


FIGURE 12-7 Homicide rates for male adolescents, age 15 to 19, resulting from the use of firearms, 1980-1994. SOURCE: U.S. Department of Health and Human Services (1997:17).

overrepresented in the population of families with incomes below the poverty level.”

Drawing on existing research findings, Hammond and Yung (1993) proposed a tripartite conceptual framework for understanding the markedly higher rates of homicide and assaultive violence among Blacks. This framework emphasizes etiological roles:

1. Host-related factors—e.g., a propensity to believe that any physical, verbal, or social offense is deliberate and malicious or that an aggressive response to a perceived provocation is legitimate; exposure to violent role models within families of origin.
2. Agent-related factors—e.g., a weapon is used to commit the act.
3. Environment-related factors—e.g., stress caused by poverty and the constellation of poverty-related factors such as joblessness, community disorganization, high population density.

Many of these factors have been shown in empirical research to be risk factors or mediators of aggressive and violent behavior (Coie and Dodge, 1998). For example, Sampson et al. (1997) found that neighbor-

hood disadvantage (e.g., high rates of poverty, unemployment, welfare receipt, and residential instability) increases violent crime and homicide partly by reducing collective efficacy (i.e., social cohesion among neighbors, combined with their willingness to intervene on behalf of the common good); however, extant data are inadequate to determine the relative contribution of these factors to race differences in aggression and violent behavior.

Nonetheless, it is clear that the sharp rise in rates of homicide and assaultive violence among Black male adolescents that began in 1985 was accompanied by increases in a cluster of various forms of disadvantage among Blacks. First, between 1980 and 1990, concentrated poverty among Blacks in metropolitan areas grew, both in terms of the absolute number and the percentage of the Black population living in neighborhoods of concentrated poverty—i.e., neighborhoods in which 40 percent or more of the residents are poor. Links have been found between increasing concentrations of the poor in certain cities and increases in violence (Gephart, 1997). The increase in these disadvantage factors may have weakened social and cultural norms that inhibit violent behavior.

Second, Black male adolescents experienced profound economic attrition during the 1970s and 1980s because of their increased vulnerability to structural changes in the economy (Fusfeld and Bates, 1984; James, 1985; Wilson, 1987). Between 1973 and 1986, real annual earnings of Black civilian males age 20 to 24 dropped 46 percent, more than two times the decline among comparable White males. During roughly the same period, the percentage of young (20 to 24 years old) male Black high school dropouts with no reported earnings whatsoever increased from 12 percent to 23 percent (William T. Grant Foundation Commission on Work, Family and Citizenship, 1988). Third, in the mid- to late-1980s there was a remarkable increase in the trafficking and use of crack cocaine in Black communities (Massing, 1998). Fourth, unemployment and diminished life prospects caused by economic downturns, which occurred at roughly the same time, are associated with the emergence of drug dealing among urban gangs as entrepreneurial enterprises offering economic maintenance for young men with limited resources for other employment. It is important to point out, however, that incidents involving drug trafficking and gang-related activity account for only a small portion of the violence among Black youth nationally, though they account for a much larger portion in large cities (Hammond and Yung, 1993).

Impact of Public Policies and Programs

Historical research lends credence to the claim that federal and local urban and economic policies (e.g., subsidization of interstate highways

and freeways, urban renewal and public housing policies), by contributing to the concentration of poverty and by failing to stem economic disinvestment and withdrawal of services in cities, played a significant role in the economic decline of inner cities and their residents and, ultimately, in community disorganization and crime (Gephart, 1997). In addition, the dismantling during the early 1980s of a national drug policy that gave priority to reducing the demand for drugs through education and treatment rather than through law enforcement interventions is thought to have fueled the drug epidemic and its attendant violence during the late 1980s. During the Reagan administration (1981 to 1988), the amount spent for drug treatment in real dollars fell to less than a quarter of what had been provided during the Nixon administration (Massing, 1998).

Intervention programs for antisocial adolescents have not proved to be highly effective. At best, they produce short-term effects that are lost within a year or two of treatment termination. For preadolescents, however, successful intervention appears to be possible, especially via those programs more comprehensive in approach that include parent training, child social-skills training, and academic support and remediation (Patterson, 1986). Several education-oriented preschool interventions for poor children have produced reductions in aggression, acting out, and antisocial behavior during adolescence (Lally et al., 1988; Johnson, 1988; Seitz et al., 1985). Some have been effective in reducing the number of probation cases, number of months on probation or parole, number of lifetime (juvenile and adult) criminal arrests (including drug-related, property, and personal-violence crimes), and number of frequent offenders (Lally et al., 1988; Schweinhart et al., 1993). Most of these numbers are large enough to be socially meaningful, with "number of frequent offenders" being especially important given that most crimes are committed by frequent offenders (Wilson and Herrnstein, 1985).

Preschool interventions that produce such effects typically are family-focused, whereby preschool education is accompanied by various core services to parents and other family members (e.g., parenting education, assistance with housing and legal problems). These programs appear to attenuate aggressive and delinquent behavior by reducing multiple risk factors associated with these outcomes (e.g., cognitive deficits, impaired socioemotional functioning in early life, low parental involvement with children, hostile or rejecting parenting, low levels of schooling and earnings during late adolescence). With rare exception (Schweinhart et al., 1993), these hypothesized pathways have not been directly tested, but they are consistent with an extensive body of research on the precursors of delinquent and externalizing behaviors (Zigler et al., 1992; Yoshikawa, 1994). Evidence of the efficacy of these programs lends support to the call for universal preschool education and complementary family support

services for poor children and families (McLoyd, 1998b). In addition to evidence that broad-based interventions at the individual level can reduce violence, persuasive data show that agent-centered interventions, such as more stringent gun control and education about the importance of gun storage and trigger-locking mechanisms, would reduce fatalities and serious levels of injury (Hammond and Yung, 1993).

Illicit Drug Use

Drug use among adolescents contributes to crime, decreases economic productivity, and increases the rate at which individuals use health-care services because of the adverse effects illicit drug use has on health. Chronic marijuana use, for example, is associated with damage to pulmonary functions, whereas cocaine is linked to eating disorders, heart attack, and stroke. Consumption of alcohol increases adolescents' risk of motor vehicle crashes and deaths, difficulties in school and the workplace, violence, criminal behavior, and suicide. Cigarette smoking is a significant risk factor for emphysema, heart disease, stroke, birth defects, and unintentional fires (Bachman and Wallace, 1991).

During the past two decades, marijuana has consistently been used (30-day and annual prevalence) by higher percentages of 10th and 12th graders than any of the other illicit drugs typically tracked in national surveys (e.g., cocaine, hallucinogens). Since the peak of the epidemic in the late 1970s, illicit drug use declined steadily and markedly until 1992, when data show increases in the use of all illicit drugs tracked in regularly repeated national surveys, with the most pronounced increases occurring in marijuana use (see Figure 12-8 A-D). The annual prevalence of marijuana use among 12th graders, for example, almost doubled between 1992 (22 percent) and 1997 (39 percent). Parallel increases were also observed for 8th and 10th graders. A substantial increase in the prevalence of daily cigarette smoking and a modest rise in the prevalence of binge drinking also occurred during this period (Johnston et al., 1998).

Prevalence and Historical Trends by Race and Ethnicity

Compared to Hispanic and White adolescents, Black adolescents participating in annual national surveys during the past two decades consistently report the lowest level of usage of marijuana (Figure 12-8A), the lowest prevalence of alcohol use and binge drinking (Figure 12-8B and C), and the lowest level of cigarette smoking (Figure 12-8D). The subgroup differences tend to be substantial. For example, in 1997, the percentage of Black, Hispanic, and White 12th graders in the Monitoring the Future national survey who reported binge drinking was 13 percent, 28 percent,

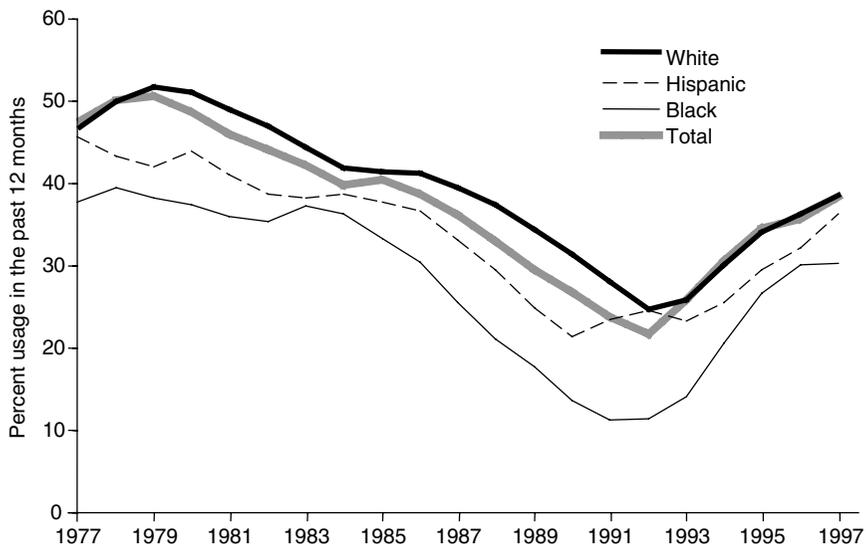


FIGURE 12-8A Marijuana: Trends in marijuana, alcohol, and cigarette usage from 1977 to 1997 among Black, Hispanic, and White 12th graders. Percentage of use during 1-year periods. SOURCE: Institute for Social Research (1997).

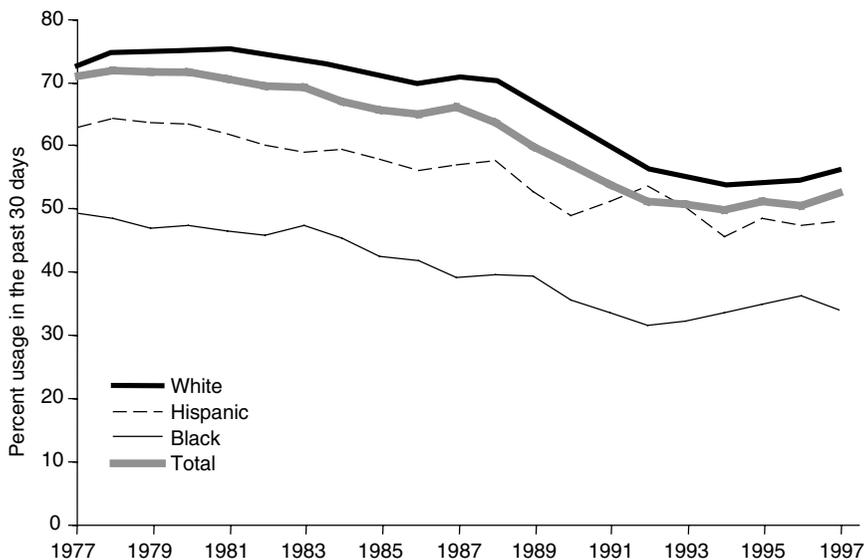


FIGURE 12-8B Alcohol: Trends in use among 12th graders during 30-day periods. SOURCE: Institute for Social Research (1997).

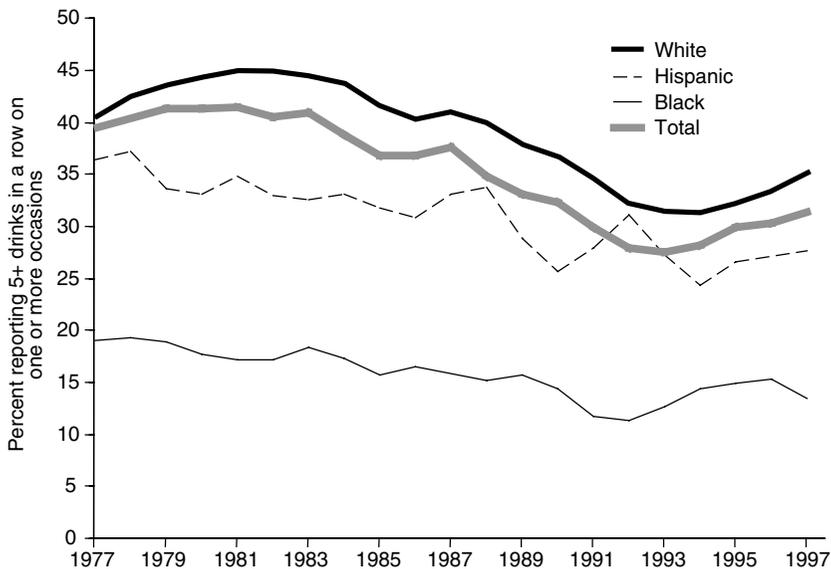


FIGURE 12-8C Binge drinking: Trends in percentage of 12th graders reporting five or more drinks in a row during two-week periods. SOURCE: Institute for Social Research (1997).

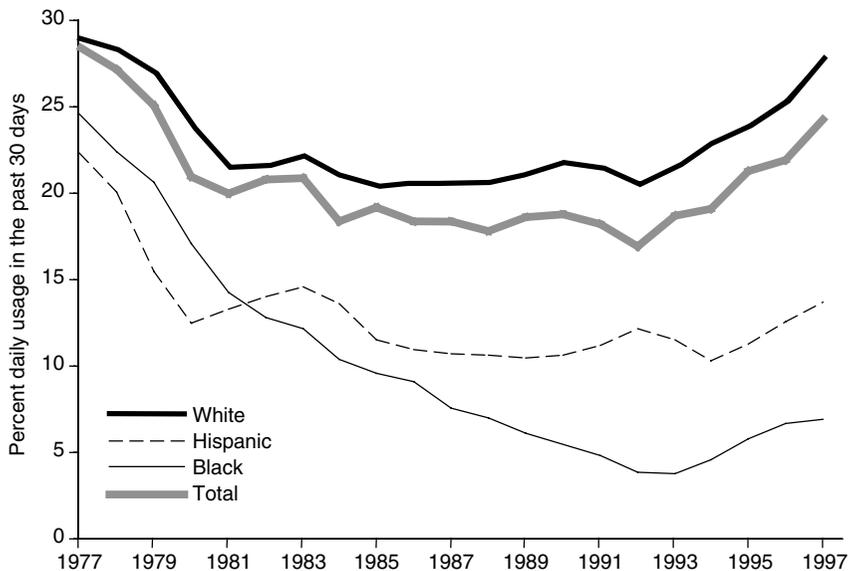


FIGURE 12-8D Cigarettes: Trends in percentage of 12th graders reporting use during 30-day periods. SOURCE: Institute for Social Research (1997).

and 35 percent, respectively (Johnston et al., 1998). Rates of use of alcohol, cigarettes, and other drugs for Hispanic adolescents typically fall between those for White and Black adolescents, with the exception that Hispanic adolescents tend to report the highest rates for cocaine use. Race and ethnic differences in levels of drug use notwithstanding, trends in drug use during the past two decades are fairly similar for all three groups. The one notable exception is that, during the 1990s, frequent cigarette smoking declined among Black female students in grades 9 to 12, while increasing among all other ethnic and gender subgroups (U.S. Department of Health and Human Services, 1997).

An extensive literature exists concerning possible reasons for the relatively low self-reported prevalence of drug use among Black and Hispanic adolescents. Explanations offered include:

1. Minority youth are less likely than White youth to report their drug use truthfully.

2. Minority youth, especially Hispanics, may be more likely than White youth to abstain from the use of most drugs, but those who do use drugs are more likely than their White counterparts to use heavily, resulting in a disproportionate share of drug-related problems.

3. Large within-group gender differences exist, such that the significant numbers of females who do not use drugs cause the overall prevalence rates for minority youth to be disproportionately low relative to those for White youth.

4. School-based surveys underestimate drug use by Black and Hispanic youth because of the higher dropout rates among minorities (and hence, minority drug users) compared to White youth (Wallace et al., 1995).

Wallace and his colleagues have creatively used various data-based approaches to test these hypotheses. Their investigations suggest that some of the differences in reported drug use between White and Hispanic samples of high school seniors can be explained by higher school dropout rates among Hispanic youth. None of the hypotheses, however, adequately accounts for the substantial gap between Black and White youth. They conclude that the general patterns of racial and ethnic differences found in their work and that of others are, on the whole, valid (Wallace and Bachman, 1991, 1993; Wallace et al., 1995).

Wallace and his colleagues suggest that Black youth may be less likely than White youth to use drugs because they have less exposure to peer or adult drug users, and given equal exposure are less vulnerable to users than are White youth. The highest rates of drug use among Black and other minority youth likely occur in segregated, high-poverty, and high-

crime areas; and inner-city Black youth are underrepresented in both the Monitoring the Future Survey and the National Survey of Drug Abuse, the two national surveys that are the major sources of data on substance use by adolescents. Findings from inner-city areas are, in fact, not well-represented in most general population surveys and probably are not generalizable to the larger population of minority youth (Dryfoos, 1990). Wallace and his colleagues also hypothesize that race differences in drug use are partially accounted for by differential levels of religiosity. Research indicates that Black youth are more religious than White youth and that religiosity is negatively related to drug use (Wallace et al., 1995).

Another important issue needing explanation is the apparent discrepancy between the relatively low self-reports of drug use by minority youth and the relatively high prevalence of drug-related problems among minority adults. Findings from the literature on alcohol consumption may be instructive in this regard. Studies indicate that alcohol use begins later among Blacks than among Whites, but once initiated, heavy use continues for a longer period of time among Blacks. This pattern of later initiation but longer and heavy use is consistent with both the lower self-reports of use among Black youth and the higher prevalence of drug-related problems among Black adults. Wallace et al. (1995:77) speculate that "Witnessing the drug-related problems of adults might deter many black youth from using drugs until they are faced with the realities of adulthood (e.g., racism, poverty, unemployment, bad relationships) that lead some of the adults around them to use drugs."

At the same time, it is important to underscore problems of "objective" data sources (e.g., Drug Abuse Warning Network [DAWN] data on drug-related emergency room visits, data on juvenile arrests for drug abuse violations, data on drug-related mortality and morbidity among adults), all of which tend to yield race-related differences opposite those found with self-report data. Until recently, DAWN data were collected from hospital emergency rooms and medical examiner facilities in metropolitan areas such as Detroit, Atlanta, and Miami—selected specifically because those areas were believed to have higher rates of problem drug use. The residents of these targeted areas are disproportionately Black and Hispanic; hence, minorities are disproportionately overrepresented in drug-related emergency room incidents as tracked by DAWN. Second, it is unclear whether Black youth are disproportionately arrested for illicit drug violations because they are actually more involved in drug-related activity, or because of heavy policing of poor, predominantly Black neighborhoods, or because of bias toward detection and arrest of certain groups (e.g., Black male adolescents). Furthermore, arrest data may not be a valid indicator of adolescent drug use because drug dealers and drug users may be different populations (Wallace et al., 1995).

Finally, skeptics point out that the overrepresentation of minority group members in public drug treatment facilities may not reflect race differences in drug abuse in the general population for two reasons: (1) these centers tend to be located in inner cities and (2) many minority group members lack money and insurance coverage to seek private treatment. In any case, extrapolating from drug-related mortality and morbidity among adults to patterns of use among youth is problematic because these two groups represent different age cohorts with different historical experiences (Wallace et al., 1995).

Impact of Public Policies and Programs

Historical trends in adolescents' drug use cannot be linked definitively to particular public policies, but a strong case can be made for their indirect effects on use of certain drugs through their impact on public attitudes. The decline in cigarette smoking among adolescents and adults that occurred in the 1970s has been attributed to drastic shifts in public opinion about its social acceptability and safety following the release of the Surgeon General's reports in 1967 and 1971 documenting the negative health consequences of smoking. The large-scale initiation of smoking prevention programs in schools in the early 1980s probably helped to sustain this downward trend among adolescents (Dryfoos, 1990). The rise in the 1990s in cigarette smoking among adolescents is generally thought to be a consequence of increased advertising and marketing by tobacco companies aimed at adolescents (e.g., the fashionable demeanor and attire of Joe Camel in Camel cigarette advertisements, the introduction of coupon programs offering Marlboro Gear and Camel Cash, the decline in the real price of cigarettes) (Rosenbaum, 1998; Shane, 1998).

Declines during the 1980s in the use of illicit drugs such as marijuana and cocaine among adolescents have been attributed to changing perceptions among adolescents about the risks of using these drugs. Conversely, increases in the use of marijuana since 1992 correspond with a decline from 1991 to 1996 in its perceived harmfulness by students across all grade levels (U.S. Department of Health and Human Services, 1997). The 1980s were marked by increasing involvement of the American public in stopping the "drug epidemic," provoked by highly publicized evidence that age of first use of illicit drugs was getting lower and lower. During this period, more than 7,000 local groups with concerns about adolescent drug use were organized around the country—National Federation of Parents for Drug-Free Youth, Parent Resources and Information on Drug Education, Mothers Against Drunk Driving. Most of these groups were comprised of suburban middle-class families. School systems, working in concert with these groups, became the central agency for substance abuse

prevention programs. Two federal agencies, the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism, played major roles in developing and implementing drug prevention demonstration projects (Dryfoos, 1990). Another deterrent, to marijuana use in particular, may have been the shift in focus of federally supported drug programs from heroin to marijuana during the latter half of the Carter administration (1977 to 1980), in response to increased complaints by parents (Massing, 1998).

Substance abuse prevention programs tend to be school-based and addressed to the general school population. These programs are more successful at changing knowledge than decreasing or preventing drug use. Among the strategies that stand out as unsuccessful in decreasing rates of drug use are programs that use only information or cognitive approaches, self-esteem enhancement or affective methods, scare tactics, and "Just Say No" media campaigns (Dryfoos, 1990). These generalized programs overlook the fact that the most intense need is among the population of adolescents with risk markers for later substance abuse, such as a history of use of any substances during preadolescence, poor academic performance, family problems, consorting with peers who use substances, and/or personality characteristics such as being a nonconformist or rebellious.

Three types of programs appear to be the most successful in preventing nonuser students from initiating drug use and convincing user students to reduce or stop use: (1) school-based social-skills curricula, (2) school-based counseling services, and (3) multicomponent collaborative community programs. The most effective curricula emphasize coping skills for dealing with anxiety, social-skills training for resisting peer pressure, and decision-making skills to foster critical thinking and formulation of counter-arguments to advertising appeals. Programs (especially those using older students as teachers and role models for younger students) tend to be more successful than teacher- or counselor-led efforts. School-based counseling services focus on individual counseling by social workers, school liaison workers, and "skilled listeners," who work collaboratively with school-based psychologists, guidance counselors, and teachers. Successful models of collaborative community programs include a wide range of training and educational approaches (e.g., school-based social-skills curricula) both within schools and in the community. Principals and teachers are key in these efforts and in programs that attempt to change school climate. Parental involvement is achieved through advisory committees, school teams, and parent education (Dryfoos, 1990).

Suicide

Suicide is the third leading cause of death among adolescents age 15 to 19. Since 1990, the rate for this segment of the population stabilized at approximately 11 deaths per 100,000 (U.S. Department of Health and Human Services, 1997). But it had nearly doubled since the 1970s, going from 5.9 percent of deaths per 100,000 adolescents in 1970 to 11 percent of deaths per 100,000 in 1994, increasing much more dramatically than in the general population. The increase has been attributed to several factors: increased rates of drug and alcohol abuse, increased psychosocial stressors and negative life events experienced by youth (e.g., parental separation and divorce, change in caretaker and living situation), increased accessibility to and use of firearms, increased pressure on children to achieve and be responsible at an early age, and increased coverage of suicide in the mass media, which, reportedly, encourages social imitation and diminishes the taboo against this act.

Empirical research provides indirect support for several of these hypotheses. Data on suicide rates in Europe, for example, indicate that the percentage change in alcohol consumption had the highest correlation with changes in suicide rates. Data also indicate that adolescents who attempt suicide experience more familial turmoil and increased social instability in the year before the suicide attempt, compared with depressed but nonsuicidal adolescents and a normal sample of adolescents. The number of firearms per 100 Americans has increased dramatically over the past several decades, and the rate of suicide by firearm has increased three times faster than the rates of all other methods for 15- to 19-year olds (for a detailed discussion of this research, see Garland and Zigler, 1993).

Prevalence and Historical Trends by Race and Ethnicity

Black youth have long had substantially lower suicide rate than White youth. Early explanations of this disparity were based on a reciprocal model for suicide and homicide—i.e., some groups were more likely to express frustration and aggression inwardly, whereas others were more likely to express them outwardly. Extant research lends little support to this model. Most studies report high correlations between outwardly aggressive behavior and suicidal behavior and the coexistence of internalized and externalized rage among adolescents who have attempted suicide. More recently, scholars have speculated that suicidal behavior is inhibited among Blacks by factors such as extended social support networks that serve as buffers against extreme stress and the effects of discrimination, and by cultural values that proscribe suicide (Garland and

Zigler, 1993; Rutledge, 1990). For example, traditional Black religion teaches that suicide is the one sin that is not forgiven and that "heavenly rewards will be given for earthly sufferings" (Rutledge, 1990:346). However, whether differences in exposure to such religious teachings explain race differences in rates of suicide remains unclear because most studies have research designs that are inadequate to address this question (e.g., studies that focus exclusively on African Americans or on European Americans). A recent study of this issue yielded findings that appear contrary to common perception. Stack and Wasserman's (1995) investigation based on a national probability sample found that church attendance lowered pro-suicide ideology more among European Americans than African Americans.

In spite of this long-standing disparity, the racial gap in the adolescent suicide rate has narrowed in recent years, especially among males, who have markedly higher suicide rates than females (Figure 12-9). In 1970, White males age 15 to 19 were twice as likely as Black males to commit suicide (9.4 percent versus 4.7 percent per 100,000), but by 1994, the rates were 18.7 percent for Whites and 16.6 percent for Blacks. This trend is particularly pronounced for the period between 1985 and 1994, when the suicide rate among Black males more than doubled, going from 8.2 percent to 16.6 percent. The suicide rate among White males during this period remained relatively stable (U.S. Department of Health and Human Services, 1997).

Race differences in suicide rates among females have shifted over time; however, suicide is infrequent among females. In 1970, among females age 15 to 19, Black and White females were equally likely to commit suicide (2.9 percent per 100,000 in each group). In 1975, however, the suicide rate for White females in this age group was twice that of their Black counterparts (3.1 versus 1.6 percent, respectively). This trend held until 1994 when the suicide rate for White females in this age category was 3.5 percent compared to 2.4 percent for Black females. Though substantially lower, suicide rates for youths age 10 to 14 have followed similar trends in terms of both race and sex differences as well as historical trends (U.S. Department of Health and Human Services, 1997).

Several hypotheses have been offered to account for the sharp rise in suicide rates among Black adolescents and, correspondingly, the narrowing of the racial gap; but none of these hypotheses has been adequately tested. Drawing on Gibbs and Martin's (1964) status integration theory of suicide, scholars have suggested that the rise to middle-class status is accompanied by a splintering of community and family support networks, a weakening of bonds to religion, and psychological distress resulting from efforts to compete in historically White-dominated social circles (Belluck, 1998). These factors can lead to internal alienation that ulti-

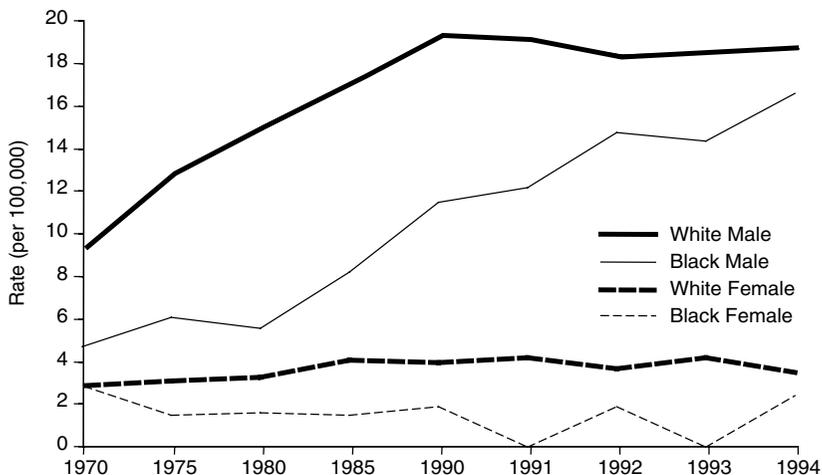


FIGURE 12-9 Adolescent (age 15 to 19) suicides: Selected years, 1970-1994. SOURCE: U.S. Department of Health and Human Services (1997:119).

mately results in self-destruction—i.e., suicide (Rutledge, 1990). There also is speculation that with greater assimilation and contact with White counterparts, Black adolescents may increasingly adopt or model some of White adolescents' strategies for coping with depression and other forms of psychological distress. Others have attributed the increase in suicide rates among Black adolescents to a growing paucity of mental health services in many Black communities and to increased availability of firearms (Belluck, 1998).

Unfortunately, national statistics on adolescent suicide rates are not separated by social class within race. It is noteworthy, however, that a recent study of adolescent suicide in the New York metropolitan area found that unlike White and Hispanic adolescents, Black adolescents who committed suicide tended to come from higher socioeconomic backgrounds than Blacks in the general population (Belluck, 1998).

American Indian and Alaska native adolescents have the highest suicide rates of any ethnic group in the United States. Suicide is the second leading cause of death in this group, although there is considerable variability across tribes. For example, the Navajo and Chippewa have rates close to the national average, whereas some Apache groups have rates four or more times higher. Research suggests that, in general, less traditional tribes have higher rates of suicide, in part because they lack a sense of belonging and support (Garland and Zigler, 1993; Wyche and

Rotheram-Borus, 1990; Wyche et al., 1990). Alcohol abuse is a major risk factor associated with suicidal behavior among Native American adolescents and adults, with some research reporting that as many as 80 percent of Native American suicide attempters also have alcohol abuse problems (Wyche and Rotheram-Borus, 1990; Young, 1988). Few studies report suicide rates for Hispanic adolescents, and substantial discrepancies exist in the data that are reported (Wyche and Rotheram-Borus, 1990).

Impact of Programs

The most common types of suicide prevention programs are crisis intervention services; telephone hotlines are the most popular. Empirical research suggests, however, that suicide hotlines are minimally effective in reducing suicidal behavior. Positive effects tend to be limited to White women, who also tend to be the most frequent users of suicide prevention services (Garland and Zigler, 1993).

An increasingly popular approach to suicide prevention involves curriculum-based prevention or education programs. Directed by mental-health professionals or educators, these programs typically train interventionists by (1) raising their awareness of the problem of adolescent suicide, (2) teaching them to identify adolescents at risk for suicide, and (3) educating them about community mental health resources and referral techniques. Unfortunately, only a few evaluation studies have been published, and most of these are poorly designed, having no control group. Other criticisms of these programs include failure to formulate the curriculum on the basis of current empirical knowledge of the risk factors of adolescent suicide, a tendency to exaggerate the incidence of adolescent suicide in an attempt to increase awareness and concern about the problem, and a lack of focus on those adolescents most at risk of suicide—e.g., incarcerated and runaway youth and dropouts (Garland and Zigler, 1993; Rotheram-Borus, 1993).

There is growing consensus that rather than adopt a narrow approach to the specific problem of adolescent suicide, efforts should be made to reduce the prevalence of risk factors of suicide—depression, lack of social support, poor problem-solving skills, and low self-efficacy. These are also risk factors for major social problems such as delinquency, substance abuse, dropping out of school, and adolescent pregnancy. Primary prevention efforts would seek to enhance adolescents' social competence, problem-solving skills, and basic mental health; schools probably are the most appropriate setting for their implementation.

Stricter gun control laws also have been proposed as a suicide-prevention strategy. Tentative evidence suggests that states with stricter laws have lower suicide rates among males and show a smaller increase

in suicide rates than states with less strict laws (Garland and Zigler, 1993). Other proposals include public awareness campaigns about the importance of storing guns and ammunition in separate, locked areas, requirements that gun dealers provide buyers with trigger locks, and making the unsafe storage of weapons a felony.

PRIORITIES FOR FUTURE RESEARCH

Conditions During Infancy

Iron Deficiency

Several unanswered questions and puzzling observations concerning iron deficiency warrant further research. Blacks consistently have lower hemoglobin levels than Whites; but differences in iron status do not seem to explain the differences in hemoglobin, at least in older children and adults (Perry et al., 1992). The high prevalence of iron deficiency in Mexican-American infants urgently requires further study. It will also be important to identify other ethnic and immigrant groups with infant dietary patterns that provide poor sources of iron. There needs to be further study of the optimal level of iron fortification of infant formula to prevent iron deficiency without adding more iron than is needed. Applying new neuroscience research methods should make it possible for the first time to determine directly how iron deficiency affects the developing brain in humans. There also continue to be unanswered questions about the effects of iron deficiency when not severe enough to cause anemia. Sensitive measures of behavior and development, guided by recent basic science research on iron's role in the brain, could be used to shed new light on this crucial issue.

Elevated Lead Levels

Recent advances will afford science the chance for a better understanding of how lead affects the developing brain. This understanding may guide specific remediation treatments in children with elevated blood lead levels. The higher prevalence of elevated lead levels among Black children, even of middle- and high-income families, demands further investigation.

Low Birth Weight

The high proportion of LBW infants among Black women, regardless of educational level, remains one of the most important puzzles to be

solved (Foster, 1997). Higher teen pregnancy rates among Blacks do not explain race differentials in LBW; although the very youngest teens have higher rates of LBW babies (Leland et al., 1995), LBW actually increases with advancing age in Black women (Geronimus, 1999). The hypothesis that the explanation is genetic has also been challenged. A recent study of West African immigrant women shows that their babies were similar in weight distribution to U.S. Whites (David and Collins, 1997). Thus, it appears that environmental and behavioral factors are adversely affecting the pregnancies of U.S.-born Black women. The contribution of altered glucose metabolism and diabetes during pregnancy to the rates of LBW among some ethnic groups is another important area of research.

Prenatal Alcohol Exposure

There is considerable evidence that undernutrition, hypoxia, intra-uterine growth retardation, and altered iron transport are important underlying or contributing factors to some ill effects of prenatal alcohol exposure. Determining the interconnections among these factors and others should increase understanding of the mechanisms by which alcohol affects the developing fetus. There is clearly an urgent need for effective treatment programs for pregnant women with drinking problems, with special approaches needed to reach Black and American Indian and Alaska Native women. Protecting the developing fetus from the harmful effects of alcohol should be a high national priority

Behavioral and Mental Health Problems Among Adolescents

As we have documented, poor children from racial minority backgrounds are more likely to start life with biologic insults and stressors that adversely affect behavior and development. We need more systematic study of whether these biologic risks increase children's vulnerability to behavioral and developmental ill effects of other disadvantages they face in growing up, such as financial stress, poor schools, dangerous neighborhoods, family violence, maternal depression, etc.

Homicide and Assaultive Violence

There is some evidence that the risk factors for violence vary among different ethnic groups, but knowledge in this area needs considerable expansion. Especially needed is evidence about which childhood experiences and behaviors, as well as social, economic, and cultural factors, are most predictive of future aggression or victimization among Black, Hispanic, and American Indian and Alaska Native males. Priority also

should be given to understanding the factors that prevent as well as buffer the effects of violence among individuals in high risk groups. Although young men are at higher risk of committing and being the victims of assaultive violence, the correlates, precipitants, and buffers of violence among young ethnic minority women also warrant systematic study. Research is also needed to determine the effectiveness of different violence prevention approaches and techniques for different ethnic groups (Hammond and Yung, 1993).

Drug Use

The apparent discrepancy between the relatively low self-reports of drug use by Black youth and the relatively high prevalence of drug-related problems among Black adults is among the most challenging issues beckoning empirical study. Research has identified several risk factors of adolescent drug use, but we possess far less knowledge about the link between these factors and the precursors of drug abuse during adulthood. We need to understand, for different ethnic groups, what factors determine the probability that individuals who used drugs to varying degrees during adolescence experience drug-related problems as adults.

Suicide

Empirical study of the factors contributing to the rise in suicide among Black males is crucial, as is the development of intervention programs based on these etiologic data. Research is needed regarding racial and ethnic group disparities in the availability, use, and effectiveness of suicide prevention programs.

Future Data Needs

Social class and income are highly interwoven with race and ethnicity. Consequently, more precise specification of racial and ethnic trends over time requires data that are disaggregated by social class or income within racial and ethnic groups. Rarely are national data presented in this manner.

Also glaring and in need of redress is the lack of across-time nationally representative epidemiological studies of depression in adolescents from different racial and ethnic backgrounds (U.S. Department of Health and Human Services, 1997). Studies of community samples indicate that depressive mood syndromes and disorders increase dramatically in adolescence compared to childhood and that they often occur in tandem with

other symptoms and disorders such as anxiety, conduct disorders, suicidal ideation, and drug use. Moreover, preadolescent or adolescent onset of clinical depression appears to be a major risk factor for adult depression and other major mental disorders (Petersen et al., 1993). Our ability to address these questions will be enhanced greatly by the recently initiated National Longitudinal Study of Adolescent Health, which includes methodology to measure depressive symptoms.

In addition, nationally repeated surveys need to include more measures of positive functioning in adolescents, as well as more indicators that may constitute precursors of behavioral and psychological outcomes during adolescence—e.g., parenting behavior of both mothers and fathers, neighborhood characteristics, and characteristics of peer groups.

Tracking the Impact of Welfare Reform

The Welfare Reform Act of 1996 stands out as the single social policy adopted in recent years with the potential to disproportionately and profoundly affect ethnic minority families and children. This law mandated large reductions in the food stamp program; decreased assistance to legal immigrants; cuts in benefits to adult welfare recipients who do not find work after two years; and a five-year lifetime limit on assistance in the form of cash aid, work slots, or noncash aid such as vouchers to poor children and families, regardless of whether parents can find employment. Exercising the vast discretion given to them under the new welfare law, many states are adopting stricter work requirements and shorter time limits for public assistance than Congress envisioned. In addition, many states will no longer increase payments to women who have additional children while receiving public assistance, on the theory that increased payments create an economic incentive for parents to have more children whom they cannot support (Pear, 1997; Super et al., 1996).

The new welfare reform law voids the long-standing principle of entitlement for poor children and adults alike, such that neither the federal government nor the states, in fact, have a duty to provide assistance to the poor for any period of time. The end of entitlement is signaled most glaringly by two aspects of the policy. (1) There is no longer a federal definition of who is eligible for assistance and, therefore, no guarantee of assistance to anyone; each state can decide whom to exclude in any way it wants, as long as it does not violate the Constitution. (2) Each state will get a fixed sum of federal money each year, irrespective of whether a recession or a local calamity causes a state to run out of federal funds before the end of the year (Temporary Assistance to Needy Families [TANF] block grant). Furthermore, although waivers will be granted for some, in most cases federally supported help will end after five years,

even if a family has done everything that was asked of it and even if it is still needy (Greenberg, 1996).

In light of race and ethnic disparities in residential patterns, employment, housing, and other economic-related factors, it is supremely important to determine whether the effects of welfare reform are less positive or more adverse for minority children and families than majority families and the factors responsible for these disparities. Poor Blacks and Hispanics are more likely than poor Whites to reside in economically depressed, societally isolated, urban neighborhoods where jobs are scarce and growth in entry level jobs is unlikely, and high-quality day care and health care are less accessible—all of which are available and accessible in most suburbs and nonmetropolitan areas. Poor Blacks and Hispanics also hold jobs with higher rates of displacement and lower rates of reemployment following layoffs (Fusfeld and Bates, 1984; James, 1985; Jargowsky, 1994; Simms, 1987; Wilson, 1996). These differences in context and economic prowess would appear to put Blacks and Hispanics at a distinct disadvantage in terms of their ability to comply and cope effectively with some of the new welfare provisions such as finding employment and staying afloat following cutoffs of welfare assistance.

Relevant research has not yet been completed, but it is clear that there is the potential for all of the major domains of child outcomes to be affected by welfare reform. The indicators examined in this paper are only some of the relevant markers that need to be tracked. In addition to assessing the effects on these outcomes, it is important to document the effect of welfare reform on the broader ecological context within which children develop. Individual and aggregate level data on the following indicators are of particular interest:

- homelessness,
- malnutrition,
- crime,
- infant morbidity and mortality,
- drug and alcohol abuse,
- family and community violence,
- child abuse and placement of children in foster care, and
- use of mental health services.

Questions that must be answered include:

- Will negative indicators of family, infant, and child functioning increase shortly after the time limits take effect?
- Over time, will these indicators return to their previous levels as families adapt?

- Are variations in welfare programs across states related to what fortunes or misfortunes befall families and children following cut-offs?
- Are welfare cutoffs and the events they trigger more detrimental if they occur during the infancy and preschool years, as opposed to middle-childhood and adolescence?
- Under what conditions do particular sets of welfare provisions have negative effects versus positive effects on children's development?

Researchers will need to be able to identify pathways of influence and intervening variables before they can answer these questions and speak with authority in policy arenas about how welfare programs might be modified to enhance children's development, or at least be rendered less damaging. Welfare provisions may influence children through their impact on a variety of variables, including household or family income, maternal employment, maternal education, maternal physical and psychological well-being, parenting and the home environment, and child care (Zaslow et al., 1995).

The multitude of questions that need to be addressed in light of welfare reform are amenable to a variety of research methodologies ranging from large-scale surveys to small-scale ethnographic studies. Data collection options include administrative records, in-home and telephone interviews, direct child assessments, self-administered questionnaires, teacher surveys, and in-home observations. Some effects can be estimated by tracking age cohorts of children within state, across time using data from various national longitudinal studies that follow children throughout childhood and into adulthood—e.g., the National Longitudinal Survey of Youth. Others may be assessed in ongoing, more rigorous within-state experimental evaluations of the effects of welfare reform demonstrations made possible by federal waivers granted to states (Collins and Aber, 1996). Still others can be addressed by across-state comparisons. Obviously, high-quality research on these issues will require creative research designs that draw on the expertise of child developmentalists, working collaboratively with sociologists, economists, social workers, and researchers from allied disciplines.

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We use data from the National Longitudinal Study of Adolescent Health (N=7,686) to determine whether racial and ethnic differences in socioeconomic stress and social protection explain group differences in the association between family structure instability and three outcomes for white, black, and Mexican-American adolescents: delinquent behavior, age at first sex, and age at first nonmarital birth. To address this discrepancy, we test two theories that have been posited to explain racial and ethnic differences in children's adjustment to family change: social protection and socioeconomic stress (McLoyd et al., 2000).